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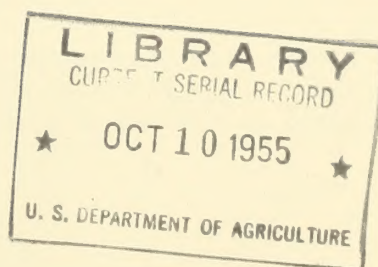
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UNITED STATES DEPARTMENT OF AGRICULTURE

Agricultural Research Service

STEROIDAL SAPOGENINS XXVI
Supplementary Table of Data For Steroidal Sapogenins XXV



SEPTEMBER, 1955



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STEROIDAL SAPOGENINS XXVI

SUPPLEMENTARY TABLE OF DATA FOR STEROIDAL SAPOGENINS XXV

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The results of this extensive survey of plant materials for steroidal sapogenins and other constituents have been published in units of 1000 plant accessions. The main text and conclusions appeared in journal articles, while the tabular data appeared as processed supplements. Thus the first 1000 was covered in No. VII (J. Amer. Pharm Assoc., Sci. Ed. 43, 1-7 (1954)), and its supplement in No. XIII (AIC-363. U. S. Dept. of Agriculture, Philadelphia 18, Pa.). The second 1000 was in No. XII (J. Amer. Pharm. Assoc. Sci. Ed. 43, 503-5 (1954)) and its supplement in No. XV (AIC-367. U. S. Dept. of Agriculture, Philadelphia 18, Pa.). The third 1000 was in No. XXV (J. Amer. Pharm. Assoc. Sci. Ed. 44, 438-440 (1955)), and its supplement is No. XXVI, the present publication.

Since in our previous operations the non-steroid groups of constituents were practically never found in species of Agave, Dioscorea and Yucca, tests for these were not made beyond about serial number 2400, and the spaces are blank.

* A LABORATORY OF THE EASTERN UTILIZATION RESEARCH BRANCH, AGRICULTURAL RESEARCH SERVICE, U. S. DEPARTMENT OF AGRICULTURE.

CORRECTIONS ON PRESENT LIST

Page 1, "Code for sapogenins", delete "y - yucca" and add "ya - yamo".

<u>Page</u>	<u>Acces. No.</u>		<u>Page</u>	<u>Acces. No.</u>	
2	2713	A. aurea	13	2238, 2239	
4	2101, 2102, 2205, 2206, 2207	A. pacifica	14	2240, 2241	D. bulbifera
	2201	A. tequilana		2463, 2464, 2551,	
5	2869-0	Change "0.9%" to "0.3 g./gal."		2552, 2639	D. floribunda
	2209	Change "dl00" to "ni"		2638	Change "3.5" to "2.5"
	2509	Change "1.5, hl00" to "1.3, h40; m, g60"		2871	D. galeottiana
6	2104	A. yaquiana		2885	D. cf. floribunda
	2152	A. tequilana	15	2885	Change "y" to "ya"
	2202	A. pacifica		2917	D. bulbifera
	2321	A. abrupta		2928	D. densiflora
	2322, 2325	A. cochlearis		2930, 2999	D. galeottiana
	2326, 2329, 2331	A. crassispina		2932	D. spiculiflora
	2336	A. aff. scabra	20	2932, 2997	Change "y" to "ya"
	2390	Matape	21	2332	Hesperaloe funifera
7	2882	A. xalapensis		2512	Y. arizonica
	2931	A. deweyana	23	2620	Bloomeria crocea
8	2941	Rauvolfia	24	2083	var. luxurians
10	2535	Transfer to Palmae		2645	Dictyosperma
	2218	Atkinsia cubensis; transfer to Malvaceae		2131	amaricaulis
11	2094A, B	Transfer to Taxaceae	26	2315	lindeniana
12	2034	Transfer to Bignoniaceae		2195	Styloma
	2251	batatas		2831	Leucadendron
13	2879, 2880, 2929	Change "y" to "ya"	27	2178	lalandei
				2272	infausta
				2267	madagascariensis
			29	2450	phantasmagorica
				2054	Clerodendrum

CORRECTIONS ON SECOND 1000 ACCESSIONS (AIC-367)

<u>Page</u>	<u>Acces. No.</u>	
3	1756	polyscantha
31	1358	Cephalotaxus sp.

TABLE I. SAPOGENINS AND OTHER CONSTITUENTS FOUND IN THE PLANT COLLECTIONS

Code for sapogenins (the suffix "genin" omitted):-				Code for plant parts:-					
c - chloro	h - heco	sm - smila	b - bark	r - root					
d - dios	k - kammo	ss - sarsasapo	bu - bulb	rh - rhizome					
dh - 9-dehydroheco	m - mano	t - tigo	fl - inflorescence	s - stem					
dm - 9-dehydromano	mk - marko	y - yucca	fr - fruit	t - tuber					
g - gito	p - penno		l - leaf	w - whole plant					
Code for source names:-				Other Codes:-					
C. G. F. - U. S. Plant Introduction Garden, Coconut Grove, Fla. (cult.)				mi - micro screening test					
Chico, Cal. - U. S. Plant Introduction Garden, Chico, Cal. (cult.)				ni - not identified					
G. D. M. - U. S. Plant Introduction Garden, Glenn Dale, Md. (cult.)				nss - not sufficient sample					
Hunt. Bot. Gard. - Huntington Botanic Garden, Pasadena, Cal. (cult.)				tr - trace					
Collection				Sapogenins					
Accession No.	Species	Source	Date Collected	Plant part	Hemolysis test	Total m.f.b., % of Total, identified, %	Flavonoids	Tannins	Sterols
ACANTHACEAE									
2628	Crossandra infundibuliformis	C. G. F.	5/52	l, fl	-		0	0	+
2269	Jacobinia coccinea	C. G. F.	2/52	l, fl	-		0	0	++
2029	Thunbergia grandiflora	C. G. F.	11/51	l, fr	-		0	0	++
ACERACEAE									
2485	Acer buergerianum	Chico, Cal.	3/52	b	-		0	0	+
2479	" truncatum	" "	3/52	b	+	0	0	+++	0
2481	" "	" "	3/52	b	+	0	+	+++	0
AMARYLLIDACEAE									
2348	Agave acklinicola	C. G. F.	2/52	l, fl	+	0.3	0	0	0
2545	" "	" "	4/52	fr	+	0.25			
2122	" atrovirens	Hunt. Bot. Gard.	1/52	l	+	0.4			
2324	" "	Tepetitlan, Jal., Mex.	2/52	l	+	0.11			
2375	" "	Satillo, Coa., Mex.	2/52	l	+	0			
2373	" attenuata	Palmito, Dur., Mex.	2/52	l	+	1.02			

Collection

Sapogenins

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total, m.f.b., %	Identified, % of Total	Flavonoids	Alkaloids	Tannins	Sterols
AMARYLLIDACEAE											
2106	<i>Agave chrysoglossa</i>	Nolasco Island, Gulf of Calif.	1/52	l	+	1.6	sm100	0	0	0	0
2154	"	Bacachaca, Son., Mex.	1/52	l	+	0.1	c90; t tr	0	0	0	+
2516	"	Sierra Bohiuacame, Son., Mex.	4/52	l, butts	-	0		0	0	0	++
2062A	"	C. G. F.	12/51	fl	+	0		0	0	0	+
2062B	"	"	12/51	fl	+	0		0	0	0	+
2547	"	Pinyon Flats, Cal.	4/52	l	+	0.75	t66; h20; g14				
2548	"	"	4/52	l	+	0					
2017	"	Fallbrook, Calif.	11/51	l	+	0		0	0	0	+
2018	"	"	11/51	l	+	0.1	h60; dh, t	0	0	0	+
2019	"	"	11/51	fr	+	0		0	0	0	+
2020	"	"	11/51	l	+	0		0	0	0	+
2395	"	Monte Carlo, Son., Mex.	2/52	l	-						
2546	"	Fallbrook, Calif.	4/52	l	+	0					
2330	"	50 mi. N.E. of San Luis Potosi, S.L.P. Mex.	2/52	l	-			0	0	0	+
2100	"	Cd. Obregon, Son., Mex.	1/52	l	+	0.22	h65; t28; c	0	0	0	+
2105	"	"	1/52	fl	+	0		0	0	0	+
2179A*	"	Nat. Instit. Health (Mex.)	1/52	juice	+	0					
2179B*	"	"	1/52	juice	+	0					
2210	"	(Mex.)	1/52	sludge	+	0					
2211	"	Pericos, Sin., Mex.	1/52	l (old)	+	0.02	t h	0	0	0	+
2212*	"	"	1/52	l (young)	+	0.1	t100	0	0	0	+
2370*	"	"	1/52	fiber	+	0		0	0	0	0
2805A	"	"	2/52	waste	+	0.4	h100				
2805B*	"	Tampico, Mex. (Mex. Fibre Co.)	6/52	l	+	0.18	t60; h40				
2596	"	Fibre Co.)	6/52	juice	+	49./1.	t70; h30				
2607	"	Rosario, B. C., Mex.	4/52	fr	+	0.2	t97; h, m				
2613	"	Socorro, B. C., Mex.	4/52	l	+	0					
2614	"	"	4/52	fr	+	0					
2617	"	Rosario, B. C., Mex.	4/52	l	+	0.15	h60; dh40				
2774	"	10 mi. S.W. Marmolito, B.C., Mex.	6/52	fr	+	0.25	t10; h, dh55; m, dm35				
2780	"	Punta Prieta, B. C., Mex.	6/52	fr	+	0.2	t40; g60				
2783	"	Rancho Mesquital, B.C., Mex.	6/52	l	+	0.6	h80; t20				
	"	"	6/52	l	+	0					

C o l l e c t i o n s

S a p o n e n i n s

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total m.f.b., %	Identified % of Total	Flavonoids	Alkaloids	Tannins	Sterols
A M A R Y L L I D A C E A E											
2717	Agave roseana	8 mi. N. Punta Frailes, B.C., Mex.	5/52	l	+	1.1	t70;h20;g10	0	0	0	+
2340	" scabra	Saltillo, Coa., Mex.	2/52	l	-			0	0	0	0
2327	" schidigera	14 mi. S.W. San Luis Potosi, S.L.P., Mex.	2/52	l	+	1.0	g100	0	0	0	0
2153	" schottii	Bachaca, Son., Mex.	1/52	l	+	1.2	c100	0	0	0	0
2099	"	Bahia San Carlos, Son., Mex.	1/52	l	+	0.8	c67;t33	0	0	0	+
2159	" shrevei	Sierra Saguaribo, Son., Mex.	1/52	l	+	0.44	t61;c28;h11	0	0	0	+
2165	"	Sierra Canelas, Chih., Mex.	1/52	l	-			0	0	0	+
2167	"	" Charuce, " Mex.	1/52	l	-			0	0	0	+
2383	"	Guajarray Scarp, Son., Mex.	2/52	l	-			0	0	0	+
2397	"	" " Mex.	2/52	l	-						
2061A	" sisalana	C. G. F.	12/51	l	+	0		0	0	0	++
2061B	"	C. G. F.	12/51	fl	+	0		0	0	0	0
2305A	"	Habana, Cuba	10/51	l (pulp)	+	0.24	t50;h50				
2305B	"	"	10/51	l (juice)	+	0	h99				
2869-0*	"	Port au Prince, Haiti	6/52	juice		0.9					
2757	" sobria	Sierra de las Palmas, B. Co., Mex.	6/52	l	+	1.3	m, dm100				
2759	"	Comondú, B. Co., Mex.	6/52	l	+	1.6	t45;h55				
2760	"	"	6/52	fr	+	0.6	t100				
2716	" and roseana	La Paz, B. Co., Mex.	5/52	l	+	0.45	t65;h, dh25;g10	0	0	0	0
2334	" striata	Canyon Huasteca, N.L., Mex.	2/52	l	+	0					
2209	" tequilana	Los Aguajitos, Sin., Mex.	1/52	l	+	0.17	d100				
2259	"	Concordia, Sin., Mex.	2/52	l	-			0	0	0	+
2046	" toumeyana	Superior, Ariz.	12/51	l	+	0.44	h92;m, dm8	0	0	0	0
2418	"	Fish Creek Canyon, Ariz.	3/52	l	+	1.37	h50;m, g, 50				
2509	"	"	3/52	l	+	1.5	h100				
2758	" vexans	Comondú, B. Co., Mex.	6/52	l	+	0.25	h100				
2337	" victorinae-reginae	Saltillo, Coa., Mex.	2/52	l	+	0		0	0	0	0
2163	" wocomahi	Sierra Guicorichi, Chich., Mex.	1/52	l	+	0		0	0	0	+
2103	" yaquiana	35 mi. N. of Guaymas, Son., Mex.	1/52	l	+	0.02	t, h, c	0	0	0	+

TABLE I. CONT. - PAGE 7

Collection			Sapogenins								
Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total m.f.b., %	Identified, % of Total	Flavonoids	Alkaloids	Tannins	Sterols
Amaryllidaceae											
2392	Agave sp.	Nacori, Son., Mex.	2/52	l	+	0					
2393	" "	Sierrita Lopez, Son., Mex.	2/52	l	+	0.3	sm100				
2394	" "	" "	2/52	l	-						
2396	" "	D. F., Mex.	2/52	l	-						
2507	" "	Regina, D. F., Mex.	3/52	l	+	0					
2517	" "	Sierra Saguaribo, Son., Mex.	4/52	l	+	0.4	t100				
2518	" "	" Jojoba, Son., Mex.	4/52	l	+	0.2	h100				
2756	" "	" de las Palmas, B. C., Mex.	6/52	l	+	0.3	t100;m				
2765	" "	6 mi. W. Canipole, B. C., Mex.	6/52	l	-						
2775	" "	Punta Prieta, B. C., Mex.	6/52	l	-						
2776	" "	15 mi. E. Punta Prieta, B. C., Mex.	6/52	fr	+	1.2	h60;dh15;g25				
2778	" "	6 mi. W. Camalli, B. C., Mex.	6/52	l	+	1.7	h, dh80;m, dm20				
2785	" "	15 mi. E. Punta Prieta, B. C., Mex.	6/52	l	+	0.7	h70;m, dm30				
2882	" "	4 mi. E. Las Vegas, Ver., Mex.	7/52	l	+	0					
2931	" "	Puente Nacional, Ver., Mex.	7/52	l	+	0.55	t40;h60				
2622	Manfreda sp.	Oaxaca, D. F., Mex.	4/52	l	+	3.2	g100				
Anacardiaceae											
2529	Anacardium excelsum	C. G. F.	4/52	l, fl	-			+	0	+	+
2651	" sp.	" "	5/52	l, fl	-			+	0	+	+
2701	Loxopterygium huasango	" "	5/52	l	-			0	0	+++	+
2411	Mangifera indica	" "	3/52	fl	+	0		+	0	++	+
2112	Metopium toxiferum	" "	1/52	l, fr	-			+	0	0	++
2127	Pleiogynium solandri	" "	1/52	l, fr	+	0		0	0	++	++
2702	Poupartia axillaris	" "	2/52	l	-			+	0	0	+
2840	Schinus dependens	" "	6/52	l, fl	-			+	0	+++	0
2841	" polygamus	" "	6/52	l	-			0	0	+++	0
2829	Spondias purpurea	" "	6/52	l, fr	-			0	0	0	0
Annonaceae											
2839	Annona paludosa	" "	6/52	l, fr	-			+	0	0	+
1134	Cananga odorata	" "	1/52	l, fl, fr	+	0		0	0	0	+

Collection

Sapogenins

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total, m.f.b., %	Identified, % of Total	Flavonoids	Alkaloids	Tannins	Sterols
APOCYNACEAE											
2230	<i>Strophanthus preussii</i>	G. D. M.	1/52	fr	+	0		0	0	0	+
2441D	"	"	3/52	fr	+			0	0	0	+
2676D	"	"	5/52	fr	+			0	0	0	0
2184A	<i>sarmentosus</i>	"	1/52	fr	+	0		0	0	0	0
2184B	"	"	1/52	fr	+	0		0	0	0	0
2231	"	"	1/52	fr	+	0		0	0	0	+
2234	"	"	1/52	fr	+	0					
2237	"	"	1/52	fr	+	0					
2287D	"	"	2/52	fr	+			0	0	0	0
2435D	"	"	3/52	fr	+			0	0	0	+
2567	"	C. G. F.	4/52	fr	+	0		0	0	0	0
2662D	"	G. D. M.	5/52	fr	+			0	0	0	0
2010	<i>speciosus</i>	"	11/51	fr	+	0		0	0	0	0
2298	<i>tholomii</i>	"	2/52	fr	+			0	0	0	+
2451	<i>welwitschii</i>	"	3/52	fr	+			0	0	0	+
2216	<i>varialis solanacea</i>	C. G. F.	1/52	fr	-			0	0	0	+
2566	"	"	4/52	fr	-			0	0	0	0
2181	<i>vinca minor</i>	G. D. M.	1/52	fr	-			0	+	0	+
AQUIFOLIACEAE											
2080A	<i>Ilex cornuta</i>	Burk. rdi	12/51	fr	+	0		0	0	0	0
2080B	"	"	12/51	fr	+	0		0	0	0	+
2081A	"	"	12/51	fr	+	0		+	0	0	+
2081B	"	"	12/51	fr	+	0		0	0	0	+
2342	"	C. G. F.	2/52	fr	-			+	0	++	++
2079	<i>fargesii</i>	G. D. M.	12/51	fr	-			0	0	0	+
2085A	<i>pedunculosa</i>	"	12/51	fr	-			0	0	++	+
2085B	"	"	12/51	fr	-			0	0	0	0
2084	<i>pernyi</i>	"	12/51	fr	-			0	0	0	0
2086	<i>rotunda</i>	"	12/51	fr	-			0	0	0	+
ARACEAE											
2282	<i>Colocasia</i> sp.	"	2/52	fr	+	0		0	0	0	0
2660	<i>Zantedeschia aethiopica</i>	"	5/52	fr	-			0	0	0	0
ARALIACEAE											
2045	<i>Schefflera actinophylla</i>	C. G. F.	11/51	fr	+	0		0	0	0	0

TABLE I. CONT. - PAGE 10

ASCLEPIADACEAE

2891 Hoya globulosa
2185A Periploca sp.
2185B "
2185C "
2303 "

C. G. F.
G. D. M.
" " " " " " " "

7/52 l, fl
1/52 l
1/52 s
1/52 l, s, r
2/52 l, r, s

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

BIGNONIACEAE

2582 Arabidaea tentaculosa
2493 " rotundata
2422 Cydista aequinoctialis
2968 Dolichandrone spathacea
2535 Gaziova treubiana

C. G. F.
" " " " " " " "

4/52 l, f, f-
3/52 l, f, fl
3/52 l, f, fl
8/52 l, f-
4/52 l, f, r

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

2844 Godmania aesculifolia
2031 Jacaranda mimosifolia
2129 Kigelia pinnata
2432 "
2136 Oroxyton indicum

" " " " " " " "

6/52 l
11/51 l, fr
1/52 l, fr-
3/52 fr
1/52 l, fr

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

2857 Palmentiera cereifera
2644 " edulis
2197 Spathodea campanulata
2949 " nitida
2863 Stereospermum euphoroides

" " " " " " " "

7/52 l, fl
5/52 l, fr
1/52 l, fr
8/52 l
7/52 l

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

2950 Tabebuia chrysea
2523 " glomerata
2869 "
2721 leuoxyla
2646 patida

" " " " " " " "

8/52 l, fl
4/52 l
7/52 l
5/52 l, fl
5/52 l, fl

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

2892 palme-i
2499 pentaphylla
2022 Tanaecium crucigerum
2531 Tecoma argentea
2189 " gaudichaudii
2564 Telomaria capensis

" " " " " " " "

7/52 l, fl
3/52 l, fl
11/51 l, fr
4/52 l, fl
1/52 l, fl
4/52 l, fl

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

BOMBACACEAE

2845 Adansonia digitata
2944 Ceiba acuminata
2943 " parvifolia
2478 Chorisia insignis
2218 Montezuma cubensis

" " " " " " " "

6/52 l
8/52 l
8/52 l
3/52 fr
1/52 l, fl

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

2192 Ochroma lagopus
2961 Pachira aquatica
2521 " fastuosa
2420 " insignis

" " " " " " " "

1/52 l, fl
8/52 l
4/52 l, fl
3/52 fl

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

BORAGINACEAE

2967 Cordia brachycalyx
2992 " leucosebestena
2898 " sebestena

" " " " " " " "

8/52 l
8/52 l
7/52 l

0 0 0 0 0
0 0 0 0 0
0 0 0 0 0

0 0 0 0 0

Collection			Sapogenins								
Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total m.f.b., %	Identified, % of Total	Flavonols	Alkaloids	Tannins	Sterols
BORAGINACEAE											
2955	<i>Cordia tremula</i>	C. G. F.	8/52	f	-			0	0	0	0
2934	<i>Ehretia anacua</i>	" "	8/52	f, fr	-			0	0	0	+
2108	" <i>laevis</i>	" "	1/52	f, fl	-			0	0	0	++
BROMELIACEAE											
2562	<i>Bromelia pinguin</i>	" "	4/52	f, fl	-			0	0	0	0
2318	<i>Pitcairnia coralina</i>	" "	2/52	f, fl	-			0	0	0	0
2120	<i>Tillandsia usneoides</i>	East N. Car.	1/52	w	-			0	0	0	+
BURSERACEAE											
2126	<i>Bursera graveolens</i>	C. G. F.	1/52	f	+	0		0	0	0	++
CACTACEAE											
2347	<i>Opuntia dilienii</i>	" "	2/52	f, fr	+	0		0	0	0	0
2352	" <i>tuna</i>	" "	2/52	f, fr	-			0	0	0	+
CANELLACEAE											
2113	<i>Canelia winterana</i>	" "	1/52	f, fr	+	0		0	0	0	0
CAPPARIDACEAE											
2494	<i>Ritchiea reflexa</i>	" "	3/52	f, fl	-			0	0	0	+
CASUARINACEAE											
2475	<i>Casuarina angulata</i>	" "	3/52	f, fl, fr	-			+	0	0	0
2991	" <i>dielsiana</i>	" "	8/52	f	-			0	0	0	+
2498	" <i>equisetifolia</i>	" "	3/52	f, fl	-			+	0	0	+
2986	" <i>glauca</i>	" "	8/52	f	-			0	0	0	0
2846	" <i>suberosa</i>	" "	6/52	f	-			+	0	0	+
2476	" <i>torulosa</i>	" "	3/52	f, fr	-			+	0	+	0
CELASTRACEAE											
2036	<i>Elaeodendron quadrangulatum</i> "	" "	11/51	f	-			0	0	0	+
2190	" <i>xylocarpum</i>	" "	1/52	f, fr	-			0	0	+	+
2175	<i>Maytenus boaria</i>	Chico, Cal.	1/52	f, s	-			0	0	0	+++
CEPHALOTAXACEAE											
2094A	<i>Cephalotaxus</i> sp.	G. D. M.	12/51	f	+	0		0	+	0	0
2094B	"	" "	12/51	f	+	0		+	+++	0	+

TABLE I. CONT. - PAGE 12

CHENOPODIACEAE

2034	<i>Pandorea ricasoliana</i>	C. G. F.	11/51 l, fl	+	0	0	0	+++
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CISTACEAE

2589	<i>Cistus monspeliensis</i>	Chico, Cal.	4/52 l, s	-	+	0	+	+
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COCHLOSPERMACEAE

2214	<i>Cochlospermum vitiifolium</i>	C. G. F.	1/52 l, fl	-	0	0	+++	+
2803			4/52 fr	+	0	0	+	0

COMBRETACEAE

2361	<i>Anogeissus pendula</i>		2/52 l, f	-	0	0	+++	++
2534	<i>Bucida buceras</i>		4/52 l, fl	-	0	0	++	++
2497	<i>Combretum farinosum</i>		3/52 l, fl	+	0	0	+	+
2746	"		6/52 fr	+	0	0	++	0
2042	" <i>grandiflorum</i>		11/51 l, f	-	0	0	0	++
2505	"		3/52 fr	-	0	0	0	+
2519	" <i>paniculatum</i>		4/52 l, fl	-	0	0	+	++
2128	<i>Conocarpus erecta</i>		1/52 l, fr	-	0	0	+++	++
2825	<i>Quisqualis indica</i>		6/52 l, fl	-	0	0	0	+
2072	<i>Terminalia bellierica</i>		12/51 l, fr	-	0	0	+++	++
2849	" <i>catappa</i>		6/52 l, fl	-	+	0	+	+
2862	" <i>edulis</i>		7/52	-	0	0	+++	++
2860	" <i>hayesii</i>		7/52	-	0	0	++	0
2708	" <i>muelletii</i>		5/52	+	0	0	+++	0
2861	" <i>myriocarpa</i>		7/52	-	0	0	++	0
2424	" <i>pellucida</i>		3/52 l, fl	-	0	0	+	++

COMPOSITAE

2044	<i>Tithonia diversifolia</i>		11/51 l, fl	+	0	0	0	0
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CONVOLVULACEAE

2076	" <i>pumoea arborescens</i>		12/51 l, fl	+	0	0	0	++
2251	" <i>batatus</i>	G. D. M.	1/52 l, t	-	0	0	0	0
2043	<i>Porana paniculata</i>	C. G. F.	11/51 l, fl	-	0	0	0	++

CORNACEAE

2026	<i>Alangium chinense</i>		11/51 l, fr	-	0	0	+++	+
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CRASSULACEAE

2160	<i>Echeveria</i> sp.	Sierra Saguaribo, Son., Mex.	1/52 l	-	0	0	0	+
2265	<i>Kalanchoe velutina</i>	C. G. F.	2/52 l, fl, r	-	0	0	0	+

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Accession
No.

Species

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Sapogenins

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m.f.b.,
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identified,
% of totalFlavo-
noidsAlka-
loidsSter-
oids

DIOSCOREACEAE

2549	<i>Dioscorea bulbifera</i>	New Delhi, India	3/52	t	+	0	0	0
2874	<i>composita</i>	El Palmar, Ver., Mex.	7/52	t	+	3.3	d100	
2879	"	2 mi. W El Fortin, Ver., Mex.	7/52	t	+	3.5	d98; y2	
2884	"	4 mi. N San Andres Tuxtla, Ver., Mex.	7/52	rh	+	6.9	d100	
2926	"	G. D. M.	8/52	rh	+	4.6	d100	
2998	"	Tapacoyan, Ver., Mex.	8/52	rh	+	2.6	d100	
3000	"	2 mi. N Mizantla, Ver., Mex.	8/52	rh	+	0	d100	
2550	<i>esculenta</i>	New Delhi, India	3/52	rh	+	0		0
2337-0	<i>hispidula</i>	Sumatra (Merck)	1/52	rh	+	0		0
2249	<i>macrostachya</i>	G. D. M.	1/52	rh	+	0		0
2873	"	El Palmar, Ver., Mex.	7/52	rh	+	0		
2880	<i>mexicana</i>	4 mi. N San Andres Tuxtla, Ver., Mex.	7/52	rh	+	0.6	d50; y50	
2883	"	S of Huatusco, Ver., Mex.	7/52	rh	+	0.5	d100	
2929	"	Cosantlan, Ver., Mex.	7/52	rh	+	1.3	d50+; y50--	
2855	<i>quaternata</i>	Centre Co., Pa.	6/52	rh	+	1.1	d100	0
2856	"	"	6/52	rh	+	0.5mi	d100	
2250	<i>sinuata</i>	G. D. M.	1/52	rh	+	1.0	d100	0
2854	<i>villosa</i>	Centre Co., Pa.	6/52	rh	+			0
2336-0	<i>zansibarensis</i>	E. Africa (Merck)	1/52	rh	+			0
2001	SP.	G. D. M.	11/51	w	+			0
2002	"	"	11/51	w	+			0
2003	"	"	11/51	w	+			0
2063	"	San Jose, C. R.	9/51	t	+			0
2063-0	"	Schering Corp.	12/51	rh	+	5.0	d100	0
2180A	"	San Jose, C. R.	1/52	rh	+	3.7	d100	0
2180B	"	"	1/52	rh	+	0		0
2180C	"	"	1/52	rh	+	0		0
2180D	"	"	1/52	rh	+			0
2238	"	G. D. M.	1/52	rh	+			0
2239	"	"	1/52	rh	+			0
2240	"	"	1/52	rh	+			0
2241	"	"	1/52	rh	+			0
2242	"	"	1/52	rh	+			0
2243	"	"	1/52	rh	+			0
2244	"	"	1/52	rh	+			0

TABLE I CONT. - PAGE 14

DIOSCOREACEAE

Dioscorea sp.	G. D. M.	1/52	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+</
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Collection

Sapogenins

Accession No.	Species	Source	Date collected	Plant part	Hemo- lysis test	Total m.f.b., %	Identified, % of Total	Flavo- nols	Alka- loids	Fam- ilias	Ste- r- ols
DIOSCOREACEAE											
2921	Dioscorea sp.	G. D. M.	8/52	l, s, r	+	0		0	0	0	0
2922	"	"	8/52	l, s, r	+	0		0	0	0	0
2923	"	"	8/52	l, s, r	+	0		+	0	+	0
2924	"	"	8/52	l, s, r	+	0		0	0	0	0
2928	"	3 mi. E Plan del Rio, Ver., Mex.	7/52	rh	+	0					
2930	"	4 mi. E Toluca, Ver., Mex.	7/52	rh	+	0					
2932	"	3 mi. E Plan del Rio, Ver., Mex.	7/52	rh	+	3.3					
2997	"	Jalapa, Ver., Mex.	8/52	rh	+	2.4					
2999	"	Ver., Mex.	8/52	rh	+	0					
2335-0	"	E. Africa (Merck)	1/52	t	+	0		0	0	0	+
2338-0	"	W. Africa (Merck)	1/52	t	+	0		+	0	0	0
2339-0	"	"	1/52	t	-	0		+	0	0	0
2340-0	"	"	1/52	t	+	0		0	0	0	0
EBENACEAE											
2804	Diospyros discolor	C. G. F.	4/52	fl	-			+	0	+++	0
2135	" rosei	"	1/52	l, fr	-			0	0	0	++
2946	" senegalensis	"	8/52	l	-			0	0	0	++
2727	" virginiana	"	5/52	l, fr	-			0	0	0	+
2956	" Maba inconstans	"	8/52	l, fl	-			0	0	0	+
ELAEGNACEAE											
2217	Elaeagnus philippensis	"	1/52	l, fr	-			0	0	0	+++
ELAEOCARPACEAE											
2581	Muntingia calabura	"	4/52	l, fl, fr	+	0		+	0	++	++
ERICACEAE											
2087A	Pieris japonica	G. D. M.	12/51	l	-			+	0	++	+
2087B	"	"	12/51	fl	-			+	0	++	0
2925	Rhododendron sp. (Azalea)	"	8/52	l	+	0					
ERYTHROXYLACEAE											
2720	Erythroxylon coca	C. G. F.	5/52	l, fl, fr	-			+	+	0	0
EUPHORBIACEAE											
2400	Aleurites fordii	"	3/52	l, fr	-			0	0	0	+
2565	" moluccana	"	4/52	fl	-			0	0	0	+
2522	" trisperma	"	4/52	l, fl	-			0	0	+++	+

TABLE 1. CONT. = PAGE 16

EUPHORBIACEAE

2733	Antidesma buniu	C. G. F.	5/52	0	0	0
2810	Platyphyllum		1/52	0	0	0
2936	Euphorbia cotinifolia		8/52	0	0	0
2023	Hippomane mancinella		11/51	0	0	0
2421	Hura crepitans		3/52	0	0	0
2830	Jatropha curcas		5/52	0	0	0
2903	Mutifida		7/52	0	0	0
2731	Joannesia princeps		5/52	0	0	0
2633	Joannesia princeps		5/52	0	0	0
2423	Phyllanthus emblica		3/52	0	0	0
2937	grandifolius		8/52	0	0	0
2555	Puffinballa oxburghii		4/52	0	0	0
2419	Sapium hippomane		3/52	0	0	0

FAGACEAE

2491	Quecus lobata	Chico, Cal.	3/52	0	0	0
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FLACOURTIACEAE

2261	Dolys abyssinica	C. G. F.	2/52	0	0	0
2402	affra		3/52	0	0	0
2399	hebecarpa		3/52	0	0	0
2362	Flacourtia montana		2/52	0	0	0
2502	sepiaria		3/52	0	0	0
2363	Xylosma longesia		2/52	0	0	0
2048	senticosa		12/51	0	0	0

GNETACEAE

2593	Ephedra tatsama	Chico, Cal.	4/52	0	0	0
2588	distachya		4/52	0	0	0
2587	edulis		4/52	0	0	0
2594	geradana		4/52	0	0	0
2591	procea		4/52	0	0	0
2586	sinica		4/52	0	0	0

GRAMINEAE

2893	Bambusa arundinacea	C. G. F.	7/52	0	0	0
2896	ventricosa		7/52	0	0	0
2895	culda		7/52	0	0	0
2897	tuldores		7/52	0	0	0
2513	Cymbopogon nardus		4/52	0	0	0
2894	Dendrocalamus strictus		7/52	0	0	0
2343	Thysanotena agrostis		2/52	0	0	0

GUTTIFERAE

2220	Calophyllum inophyllum		1/52	0	0	0
2901	Garcinia benthami		7/52	0	0	0
2524	Garcinia binucao		4/52	0	0	0
2888			7/52	0	0	0

TABLE I. CONT. - PAGE 17

Collection			Sapogenins								
Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total m.f.b., %	Identified, % of Total	Flavonoids	Alkaloids	Fatty acids	Sterols
GUTTIFERAE											
2528	<i>Garcinia livingstonei</i>	C. G. F.	4/52 l, fl	-	-	0		+	0	0	+
2401	<i>mooreana</i>	"	3/52 l, fl	+	-	0		0	0	+++	+
2823	<i>spicata</i>	"	6/52 fl	-	-	0		++	0	0	0
2219	<i>tinctoria</i>	"	1/52 l, fl	+	-	0		+	0	0	0
HERNANDIACEAE											
2935	<i>Hernandia peltata</i>	"	8/52 l	-	-			0	0	0	0
LAURACEAE											
2368	<i>Persea americana</i>	"	2/52 fl	-	-			+	0	0	+
LECYTHIDACEAE											
2021	<i>Lecythis elliptica</i>	"	11/51 l, fr	-	-			0	0	+++	++
LEGUMINOSAE											
2116	<i>Abrus precatorius</i>	"	1/52 l, fr	-	-	0		0	0	0	++
2317	<i>Acacia adansonii</i>	"	2/52 l	+	-	0		+	0	+++	0
2077	<i>auriculaeformis</i>	"	12/51 l, fl, fr	+	-	0		0	0	+++	+
2722	<i>bonariensis</i>	"	5/52 l, fl	+	-	0		0	0	0	+
2150	<i>catechu</i>	"	1/52 fr	+	-	0		+	0	0	0
2428	<i>confusa</i>	"	3/52 l, fl	-	-			0	+	++	+
2723	<i>cunninghamii</i>	"	5/52 l, fr	-	-			+	0	++	0
2964	<i>horrida</i>	"	8/52 l, fl	-	-			0	0	0	0
2724	<i>lutea</i>	"	5/52 l, fl	-	-			+	0	0	+
2199		"	1/52 l, fl, fr	+	-	0		+	0	0	0
2427	<i>modesta</i>	"	3/52 l, fl	+	-	0		0	0	0	+
2544	<i>nilotica</i>	"	4/52 fl	+	-	0		+	0	0	0
2425	<i>seyal</i>	"	3/52 l, fr	-	-			0	0	+++	++
2426	<i>villosa</i>	"	3/52 l, fl	-	-	0		0	0	+++	++
2556		"	4/52 l, fl	+	-	0		0	0	0	+
2847	<i>Acrocarpus fraxinifolius</i>	"	6/52 l	-	-			+	0	+	+
2954	<i>Adenanthera microsperma</i>	"	8/52 l	-	-			0	0	0	0
2951	<i>Albizia berteriana</i>	"	8/52 l	-	-			0	0	0	0
2486	<i>julibrissin</i>	Chico, Cal.	3/52 b	+	+	0		0	0	0	0
2482	<i>kalkora</i>	"	3/52 b	+	+	0		0	0	0	0
2484	<i>katangensis</i>	"	3/52 b	+	+	0		0	0	0	0
2959	<i>lebbeck</i>	C. G. F.	8/52 l	-	-	0		0	0	0	+++
2314	<i>lebbeckoides</i>	"	2/52 l, fr	+	+	0		0	0	0	+
2417	<i>lepantha</i>	"	3/52 fr	+	+	0		0	0	0	0
1906		G. D. M.	8/52 l, s, r	+	+	0		0	0	0	0

Collection

Sapogenins

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total m.f.b., %	Identified, % of total	Flavonoids	Aldaric acids	Sterols
LEGUMINOSAE										
2720-0A	<i>Glycyrrhiza glabra</i>	Turkey (MacAndrews & Forbes)	5/52	b	+	0		+	0	0
2720-0B	" <i>glandulifera</i>	" "	5/52	b, r	+	0		0	0	0
2720-0C	" <i>glandulifera</i>	" "	5/52	r	+	0		0	0	0
2969-0	" <i>glandulifera</i>	" "	8/52	b		0				
2721-0A	" <i>violacea</i>	Iraq (MacAndrews & Forbes)	5/52	b	+	0		0	0	0
2721-0B	" <i>violacea</i>	" "	5/52	b, r	+	0		0	0	0
2721-0C	" <i>violacea</i>	" "	5/52	r	+	0		0	0	0
2434	<i>Haematoxylum campecheanum</i>	Forbes	3/52	fr	+	0		0	+++	+
2850	<i>Hebestigma cubense</i>	C. G. F.	6/52	l	-	0		0	0	+
2198	<i>Leucaena glauca</i>	" "	1/52	l, fr	-	0		0	0	++
2890	<i>Libidibia punctata</i>	" "	7/52	l	-	0		0	0	0
2945	<i>Lonchocarpus lucidus</i>	" "	8/52	l, fl	-	0		+	0	0
2994	" "	" "	8/52	l	-	0		0	0	0
2634	<i>Lysidice rhodostegia</i>	" "	5/52	l, fl	-	0		+	++	++
2125	<i>Lysitoma divaricata</i>	" "	1/52	l, fr	+	0		+	0	++
2940	" <i>latisiliqua</i>	" "	8/52	l	-			+	0	++
2661	<i>Mimietia ferruginea</i>	G. D. M.	5/52	l, r, s	-			0	0	0
2109	" <i>ovalifolia</i>	C. G. F.	1/52	l, fr	-			+	0	++
2569	" "	" "	4/52	fl	+	0		0	0	0
2115	<i>Myroxylon pereirae</i>	" "	1/52	l, fr	+	0		0	0	+
2952	<i>Parkia biglobosa</i>	" "	8/52	l	-			0	0	++
2948	<i>Peltophorum dubium</i>	" "	8/52	l, fl	-			+	++	+
2223	<i>Phytolophum vogelianum</i>	" "	1/52	l, fr	-			+	+++	
2625	<i>Phytolobus septentrionalis</i>	" "	5/52	l	-			0	0	+++
2408	<i>Pithecellobium confine</i>	" "	3/52	l, fl, fr	-			0	0	+
2867	" <i>dulce</i>	" "	7/52	l	-			0	0	0
2993	" "	" "	8/52	l	-			0	0	+
2537	" "	" "	4/52	l, fl	+	0		0	0	++
2902	<i>Junghuhnianum</i>	" "	7/52	fr	-			0	0	0
2990	<i>Pithecellobium pruinatum</i>	" "	8/52	l	-			0	0	0
2799	<i>Pithecellobium scallare</i>	" "	4/52	l, fl	+	0		0	0	+

Collection

Sapogenins

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total m.f.b., %	Identified, % of Total	Flavonoids	Alkaloids	Tannins	Sterols
LILIACEAE											
2609	<i>Yucca peninsularis</i>	San Miguel, B. C., Mex.	4/52	l	+	1.8	t100				
2611	"	"	4/52	l	+	1.03	g53				
2616	"	"	4/52	l	+	0.9	t50: g50				
2618	"	"	4/52	fr	+	0.41	t100				
2601	<i>schidigera</i>	Fernando, B. C., Mex.	4/52	l	+	0.34	ss100				
2608	"	"	"	"	"	"	"				
2777	"	Mex. Agustín, "	2/52	l	+	1.3	ss55: mk45				
2161	" sp.	Jecapaco, Chih., Mex.	6/52	fr	+	3.3	ss80: mk20				
2387	"	Tierra Negra, Son., Mex.	1/52	l	+	0.3	ss100	0	0	0	++
2512	"	El Datil, Son., Mex.	4/52	l	+	1.4	ss100				
2620	<i>Zigadenus</i> sp.	Rosario, B. C., Mex.	4/52	w	+	1.1	ss100	0	0	0	0
LOGANIACEAE											
2568	<i>Strychnos spinosa</i>	C. G. F.	4/52	fl	+	0		0	0	0	+
LYTHRACEAE											
2900	<i>Lagerstroemia speciosa</i>	"	7/52	fl	-			0	0	+++	0
2358	<i>Woodfordia fruticosa</i>	"	2/52	l, fl	+	0		0	0	+++	++
MALPIGHIACEAE											
2800	<i>Byrsonima spicata</i>	"	4/52	l	-			0	0	+++	+
2385	<i>Hiptage benghalensis</i>	"	2/52	l, fl	-			0	0	0	++
2584	<i>Malpighia puniceifolia</i>	"	4/52	fl	-			0	0	0	++
2366	<i>Stigmaphyllon fulgens</i>	"	2/52	l, fl	-			0	0	0	++
2927A	<i>humboldtianum</i>	El Palmar, Ver., Mex.	6/50	l, s	+	0		0	0	0	++
2927B	"	"	6/50	r, s	+	0		0	0	0	+
2927	"	G. D. M.	8/52	w	+	0		0	0	0	+
2572	<i>ledrolium</i>	C. G. F.	4/52	l, fl	+	0		+	0	0	+
2560	<i>lingulatum</i>	"	4/52	l, fl	-			0	0	0	0
2593	"	"	4/52	fr	+	0		+	0	0	0
2471	<i>Thryallis glauca</i>	"	3/52	l, fl	-			+	0	++	0
MALVACEAE											
2474	<i>Abutilon mollissimum</i>	"	3/52	l, fl, fr	-			0	0	0	0
2133	<i>Bombacidenron vidalianum</i>	"	1/52	l, fl	+	0		0	0	0	+
2149	<i>Hibiscus platanifolius</i>	"	1/52	fr	-			0	0	0	+
2244	<i>Hibiscus tricuspidis</i>	"	1/52	l, fl	-			0	0	0	+
2041	<i>Kydia calycina</i>	"	11/51	l, fl	-			0	0	0	0
2221	<i>Thespesia grandiflora</i>	"	1/52	l, fl	+	0		0	0	0	++

TABLE 1- CONT. - PAGE 22

MELASTOMATACEAE

2728	<i>Tetrazygia bicolor</i>	C. G. F.	5/52 l, fl	0	0	+++	0
MELIACEAE							
2819	<i>Cedrela odorata</i>	" "	6/52 l	0	0	0	0
2865	<i>Khaya nyasica</i>	" "	7/52 l	0	0	0	+
2027	<i>Melia azedarach</i>	" "	11/51 l, fr	0	0	0	+
2496	<i>Melia candollei</i>	" "	3/52 l, fl	0	0	0	+
2641	<i>Swietenia candollei</i>	" "	5/52 l	+	0	+	+
2642	" <i>humilis</i>	" "	5/52 l	+	0	+++	++
2640	" <i>macrophylla</i>	" "	5/52 l	+	0	+++	+
2699	<i>Trichilia chirindensis</i>	" "	5/52 l	+	0	0	++
2697	<i>Trichilia hirta</i>	" "	5/52 l	+	0	0	0
2953	<i>Spondiodes</i>	" "	8/52 l	0	0	0	0

MENISPERMACEAE

2585	<i>Cocculus trilobus</i>	Chico, Cal.	4/52 l, s	0	0	0	0
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MORACEAE

2137	<i>Ficus aurea</i>	C. G. F.	1/52 l, fr	0	0	0	0
2515	<i>Lotiniifolia</i>	San Bernardo, Son., Mex.	4/52 l	0	0	++	++
2836	<i>Cumingii</i>	C. G. F.	6/52 l, fr	0	0	0	0
2513	<i>padifolia</i>	San Bernardo, Son., Mex.	4/52 l	0	0	0	+
2514	<i>radulina</i>	" "	4/52 l	0	0	0	+

MORINGACEAE

2963	<i>Moringa oleifera</i>	C. G. F.	8/52 l	0	0	0	+
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MUSACEAE

2407	<i>Streitzia aba</i>	" "	3/52 l, fr	0	0	0	+
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MYRSINACEAE

2050	<i>Ardisia humilis</i>	" "	12/51 l, fr	0	0	0	+
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MYRTACEAE

2429	<i>Callistemon lanceolatus</i>	" "	3/52 l, fl	0	0	+++	+
2430	<i>rigidus</i>	" "	3/52 l, fr	0	0	+++	+
2229	<i>Eugenia coronata</i>	" "	1/52 fr	0	0	0	0
2406	<i>dalbergioides</i>	" "	3/52 l, fr	0	0	0	+
2580	<i>dombeyi</i>	" "	4/52 l, fr	0	0	+++	++
2629	<i>eucalyptoides</i>	" "	5/52 l, fl	+	0	0	+
2313	<i>jambos</i>	" "	2/52 l, fl	0	0	+++	+
2802	<i>luschnathiana</i>	" "	4/52 l, fl	+	0	+++	0
2364	<i>supra-axillaris</i>	" "	2/52 l, fr	0	0	+++	++
2579	<i>uniflora</i>	" "	4/52 l, fl, fr	0	0	+++	0
2268	<i>Metaleuca genistifolia</i>	" "	2/52 l, fr	+	0	+++	+
2416	" "	" "	3/52 fl	0	0	+++	+
2636	<i>Psidium guajava</i>	" "	5/52 fl	+	0	+++	+

Collection			Sapogenins				
Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total, m.f.b., %	Identified, % of Total
MYRTACEAE							
2635	Psidium guineense	C. G. F.	5/52	fl	-		
2414	Syzygium cumini	"	3/52	fl	+		+++
2193	" lineatum	"	1/52	l, fl	-	0	0
2504	"	"	3/52	fr	-		+++
2703	" syzygioides	"	5/52	l	-		+
2798	Tristania conferta	"	4/52	l, fl	+	0-3 nss	+
NYCTAGINACEAE							
2040	Bougainvillea glabra	"	11/51	l, fl	-		+
2541	" spectabilis	"	4/52	l, fl	+	0	0
2542	" warszewiczii	"	4/52	l, fl	+	0	0
OCHNACEAE							
2503	Ochna mossambicensis	"	3/52	l, fl, fr	-	0	+
OLEACEAE							
2225	Forestiera rhamnifolia	"	1/52	fr	-		++
2490	Fraxinus sp.	Chico, Cal.	3/52	b	-	0	+
2995	Olea verrucosa	C. G. F.	8/52	l	-	0	++
2082	Osmanthus ilicifolius	G. D. M.	12/51	l	-	0	0
2590	Syringa oblata var. affinis	Chico, Cal.	4/52	l, s	-	+	0
2592	"	"	4/52	fl	+	0	0
ONAGRACEAE							
2083	Fuchsia boliviana V. luxurians	G. D. M.	12/51	l	-	0	++
OXALIDACEAE							
2049	Averrhoa bilimbi	C. G. F.	12/51	l, fr	+	0	++
2068	" carambola	"	12/51	l, fr	-	+	+
PALMAE							
2132	Adonidia merrillii	"	1/52	l, fr	-	0	++
2138	Arecastrum romanzoffianum	"	1/52	l, fl, fr	-	0	++
2200	Arikuryroba schizophylla	"	1/52	l, fl, fr	-	0	++
2069	Attalea cohune	"	12/51	l, fl	-	0	++
2468	Bismarckia nobilis	"	3/52	l, fr	+	0	0
2557	Brahea dulcis	"	4/52	l, fl	+	+	+
2052	Butia bonnetii	"	12/51	l, fr	-	0	+
2626	" capitata var. odorata	"	5/52	l, fl, fr	-	0	0

Collection			Sapogenins							
Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total, m. l., b., % of total	Flavonols	Alkaloids	Tannins	Sterols
PANDANACEAE										
2817	<i>Pandanus baptistii</i>	C. G. F.	6/52	l, r	—		0	0	0	0
2818	" <i>tectorius</i>	" "	6/52	l, r	—		0	0	0	0
PASSIFLORACEAE										
2833	<i>Passiflora suberosa</i>	" "	6/52	l, fl	—		+	0	0	0
PINACEAE										
2095	<i>Abies holophylla</i>	G. D. M.	12/51	l	—		0	0	++	+
2403	<i>Callitris quadrivalvis</i>	C. G. F.	3/52	l, fl	—		0	0	++	++
2097	<i>Cedrus atlantica</i>	G. D. M.	12/51	l	+	0	+	0	0	+
2091	<i>Chamaecyparis pisifera</i> var. <i>plumosa</i>	" "	12/51	l	—		0	0	++	0
2078	<i>Cupressus benthami</i>	C. G. F.	12/51	l, fr	—		0	0	+	0
2169	" <i>funebris</i>	Chico, Cal.	1/52	l, s	—		+	0	+	++
2842	" "	C. G. F.	6/52	l	—		+	0	0	0
2170	" <i>sempervirens</i>	Chico, Cal.	1/52	l, s	—		+	0	++	0
2173	var. <i>pyramidalis</i>	" "	1/52	l, s	—		+	0	++	++
2053	<i>Juniperus barbadensis</i>	C. G. F.	12/51	l, fr	+	0	0	0	+	+
2433	" "	" "	3/52	fr	—		0	0	+	0
2843	" <i>procera</i>	" "	6/52	l	—		+	0	0	+
2096	" <i>sp.</i>	G. D. M.	12/51	l	—		0	0	+	+
2088	<i>Picea omorika</i>	" "	12/51	l	—		0	0	++	0
2089	<i>Abies pungens</i>	" "	12/51	l	—		0	0	++	++
2093	<i>Pinus armandi</i>	" "	12/51	l	+	0	0	0	+	0
2090	" <i>bungeana</i>	" "	12/51	l	+	0	0	0	+	+
2177	" "	Chico, Cal.	1/52	l, s	+	0	0	0	++	++
2171	" <i>sabiniana</i>	" "	1/52	l, s	+	0	0	++	0	++
2183	<i>Pseudotsuga taxifolia</i>	G. D. M.	1/52	l	—		0	0	++	0
2174	<i>Thuja orientalis</i>	Chico, Cal.	1/52	l, s	+	0	0	0	+	++
2092	" <i>sp.</i>	G. D. M.	12/51	l	—		0	0	++	+
2182	<i>Tsuga caroliniana</i>	" "	1/52	l	+	0	+	0	0	+
PIPERACEAE										
2140	<i>Piper tuberculatum</i>	C. G. F.	1/52	l, fl, fr	—		0	0	0	+
PLATANACEAE										
2489	<i>Platanus sp.</i>	Chico, Cal.	3/52	b	—		+	0	+	++

TABLE I. CONT. = PAGE 26

POLYGALACEAE									
2571	Securidaca diversifolia	C. G. F.	4/52 fl	+	0	0	0	0	0
POLYGONACEAE									
2033	Antigonon leptopus	" "	11/51 fr	-	0	0	+	+++	+++
2075	Coccoloba diversifolia	" "	12/51 fr	-	0	0	+	++	++
2035	Coccoloba grandifolia	" "	11/51 fr	-	0	0	+	+	+
2228	krugii	" "	1/52 fr	-	0	0	+	+	+++
2938		" "	8/52 fl	-	0	0	+	+	+++
2866	uvifera	" "	7/52 fl	-	0	0	0	+	+
2619	Rumex hymenosepalus	Rosario, B.C., Mex.	4/52 fl	-	0	0	0	+++	0
2051	Ruprechtia coriacea	C. G. F.	12/51 fl	-	0	0	+	++	++
2353		" "	2/52 fr	-	0	0	+	+++	+++
2215	Triplaris americana	" "	1/52 fl	-	+	0	+	++	++
2637		" "	5/52 fr	-	0	0	+++	0	0
2939	cumingiana	" "	8/52 fl	-	0	0	0	+++	+++
2409	surinamensis	" "	3/52 fl	-	0	0	0	0	++
2962		" "	8/52 fl	-	0	0	0	0	++
PORTULACACEAE									
2736	Talinum paniculatum	" "	6/52 fr	-	0	0	0	0	0
PROTEACEAE									
2831	Leucodendron capense	" "	6/52 fl	-	+	0	+	0	+
2316	Macadamia ternifolia	" "	2/52 fl	-	0	0	0	0	+
RHAMNACEAE									
2405	Colubrina cubensis	" "	3/52 fl	+	0	0	0	++	++
2957	ferruginosa	" "	8/52 fl	-	0	0	0	0	0
2826	Gouania lupuloides	" "	6/52 fl	-	0	0	0	0	+
2415	Zizyphus mauritiana	" "	3/52 fr	+	0	0	0	+	+
ROSACEAE									
2359	Chrysobaenus icaco	" "	2/52 fr	-	+	0	++	+++	+++
2172	Eriobotrya japonica	Chico, Cal.	1/52 bud, s	+	0	0	+	++	++
2413		C. G. F.	3/52 fr	+	0	0	0	+	+
2821	Licania arborea	" "	6/52 fl	-	++	0	0	+	+
2412	rigida	" "	3/52 fl	-	+	0	0	+	+
2178	Pyracantha coccinea var. laurandi	Chico, Cal.	1/52 fr, s	+	+	0	++	+	+
RUBIACEAE									
2996	Adina cordifolia	C. G. F.	8/52 bu	-	+	0	0	+	+
2694	Cephaelis sp.	Mendoza, Argentine	5/52 fl	-	0	0	0	0	0
2039	Coffea arabica	C. G. F.	11/51 fl	-	0	0	0	+	+
2125	d'bowskii	" "	4/52 fl	-	+	0	0	+	+
2125	Geippa americana	" "	5/52 fl	-	+	0	0	0	0
2539	lxera lutea	" "	4/52 fl	+	+	0	+	+	+
2357	parviflora	" "	2/52 fl	-	+	0	+	+	+

Collection

Sapogenins

Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Total, m.f.b., %	Identified, % of total	Flavonoids	Alkaloids	Tannins	Sterols
RUBIACEAE											
2337	<i>Paederia foetida</i>	C. G. F.	11/51	l, fr	-			0	0	0	+
2345	<i>Psychotria bacteriophila</i>	"	2/52	l, fr	-			0	0	0	++
2360	<i>Randia formosa</i>	"	2/52	l, fr	-			0	0	0	0
2272	<i>Vangueria infansia</i>	"	2/52	l, fr	-			0	0	0	++
2267	<i>V. madascariensis</i>	"	2/52	l, fr	+	0		0	0	0	++
RUTACEAE											
2117	<i>Casimiroa edulis</i>	"	1/52	l, fl	-			0	0	0	+
2506	"	"	3/52	fr	-			0	0	0	0
2118	<i>tetrameria</i>	"	1/52	l, fl	-			0	0	0	0
2815	<i>Citropsis gilletiana</i>	"	6/52	l, fr	-			0	0	0	0
2058	<i>Citrus amblycarpa</i>	"	12/51	l, fr	+	0		0	0	0	0
2056	" <i>aurantium</i>	"	12/51	l, fr	-			0	0	0	0
2816	" <i>grandis</i>	"	6/52	l	-			0	0	0	0
2067	" <i>medica</i>	"	12/51	l	+	0		+	0	0	+
2057	" <i>reticulata</i> x	"									
	<i>paradisi</i>	"	12/51	l, fr	+	0		0	0	0	++
2820	<i>paradisi</i>	"	6/52	l	-			0	0	0	+
2812	" <i>sinensis</i>	"	6/52	l	-			+	0	0	0
2059	" <i>sp.</i>	"	12/51	l, fr	+	0		0	0	0	+
2811	"	"	6/52	l, fr	-			0	0	0	0
2055	"	"	12/51	l, fr	+	0		0	0	0	0
2226	<i>Murraya exotica</i>	"	1/52	fr	-			0	0	0	0
2735	" <i>koenigii</i>	"	6/52	l, fl	+	0		0	0	0	0
2813	<i>Pamburus missionis</i>	"	6/52	l, fl	-			0	0	0	0
2814	<i>Poncirus trifoliata</i>	"	6/52	l, fr	-			0	0	0	0
2466	<i>Swinglea glutinosa</i>	"	3/52	l, fr	-			0	0	0	0
2121	<i>Zanthoxylum clava-herculis</i>	East N. Car.	1/52	s	+	0		0	0	0	0
SALICACEAE											
2483	<i>Populus tomentosa</i>	Chico, Cal.	3/52	b	-			+	0	0	0
SAPINDACEAE											
2650	<i>Alectryon subcinerum</i>	C. G. F.	5/52	l	-			0	0	0	+++
2709	<i>Dimocarpus longan</i>	"	5/52	fl	-			0	0	+	+
2574	<i>Paulinia turbacensis</i>	"	4/52	l, fl	-			+	0	0	0
2858	<i>Sapindus indica</i>	"	7/52	l	-			0	0	+++	+
2071	" <i>senegalensis</i>	"	12/52	l, fl	+	0		0	0	+	++
2477	" <i>trifoliata</i>	"	3/52	l, fr	+	0		0	0	0	0

TABLE 1. CONT. - PAGE 28

SAPINDACEAE

2520	<i>Sapindus trifoliata</i>	C. G. F.	4/52 l, fr	+	0	0	0	0	0
2480	<i>utilis</i>	Chico, Cal.	3/52 b	+	0	0	0	0	0
2696	<i>Schleichera triluga</i>	C. G. F.	5/52 l, fl	-	0	0	0	0	0
2661	<i>Serjania mexicana</i>	" "	4/52 l, fl, fr	-	0	0	0	0	0

SAPOTACEAE

2500	<i>Chrysophyllum calinito</i>	" "	3/52	-	0	0	0	0	0
2501	<i>oliviforme</i>	" "	3/52 l, fr	-	0	0	0	0	0
2830	<i>Lucuma serpentaria</i>	" "	6/52 l, fl	-	0	0	0	0	0
2698	<i>Malacantha warneckeana</i>	" "	5/52 l, fl	+	0	0	0	0	0
2191	<i>Mimusops kauki</i>	" "	1/52 l, fr	+	0	0	0	0	0
2859	<i>roxburghiana</i>	" "	7/52 l, fr	-	0	0	0	0	0

SCROPHULARIACEAE

2310	<i>Russelia juncea</i>	" "	2/52 l, fl	-	+	0	+	+	+
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SIMARUBACEAE

2960	<i>Alvaradoa amorphoides</i>	" "	8/52 l, fl	-	0	0	0	0	0
2966	<i>Picrodendron baccatum</i>	" "	8/52 l	-	0	0	0	0	0

SOLANACEAE

2404	<i>Brunfelsia americana</i>	" "	3/52 l, fl	-	0	0	0	0	0
2620	<i>Cestrum nocturnum</i>	" "	5/52 l, fl	+	0	0	0	0	0
2905	<i>Duboisia leichardtii</i>	G. D. M.	8/52 l, s, r	+	0	0	0	0	0
2233	<i>Solanum lycopersicum</i>	" "	1/52 r	-	0	0	0	0	0
2284	<i>sp.</i>	" "	2/52 l, r, s	+	0	0	0	0	0
2658	"	" "	5/52 l, r, s	-	0	0	0	0	0

SONNERATIACEAE

2695	<i>Duabanga sonneratioides</i>	C. G. F.	5/52 l	-	0	0	0	0	0
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STERCULIACEAE

2473	<i>Brachychiton bidwillii</i>	" "	3/52 l, fl	-	0	0	0	0	0
2222	<i>Dombeya cayeuxii</i>	" "	1/52 l, fl	-	0	0	0	0	0
2835	<i>Firmiana barkeri</i>	" "	6/52 l	-	0	0	0	0	0
2111	<i>Guazuma umifolia</i>	" "	1/52 l, fr	-	0	0	0	0	0
2114	<i>Helicteres jamaicensis</i>	" "	1/52 l, fr	-	0	0	0	0	0
2128	<i>Kleinhovia hospita</i>	" "	1/52 fr	-	0	0	0	0	0
2797	<i>Sterculia apetala</i>	" "	4/52 l	-	0	0	0	0	0
2796	<i>colorata</i>	" "	4/52 l, fl	-	0	0	0	0	0
2795	<i>lanceolata</i>	" "	4/52 l, fr	-	+	0	0	0	0
2807	<i>Theobroma cacao</i>	" "	6/52 l, fr	-	0	0	0	0	0

TAXODIACEAE

2098	<i>Cunninghamia lanceolata</i>	G. D. M.	12/51 l	-	0	0	+	+	+
2176	<i>Sequoia sempervirens</i>	Chico, Cal.	1/52 l, s	+	0	0	+	+	+

Collection			Accession No.	Species	Source	Date collected	Plant part	Hemolysis test	Sapogenins				
Total, m.f.b., % of Total									Flavonoids	Alkaloids	Tannins	Sterols	
THEOPHRASTACEAE													
2356	Jacquinia	pungens	C. G. F.	2/52	l, fr	+	0	0	0	0	0	0	0
2388	"	"	Rancho Bachoco, Son., Mex.	2/52	fr	+	0						
2748	"	"	C. G. F.	6/52	fl	+	0	+	0	0	0	+	+
TILIACEAE													
2025	Berrya	ammonilla	" "	11/51	l, fr	-		0	0	0	0	++	++
2119	"	quinquelocularis	" "	1/52	fl	-		0	0	0	0	+	+
2828	Grewia	asiatica	" "	6/52	l, fr	-		0	0	0	0	0	0
2470	Luehea	divaricata	" "	3/52	l, fr	-		0	0	0	0	0	0
2851	"	"	" "	6/52	l	-		0	0	0	0	+	+
2791	Microcos	lateriflora	" "	4/52	l, fl	-		+	0	0	0	+	+
2838	"	"	" "	6/52	fr	-		0	0	0	0	0	0
2487	Tilia	dasystyla	Chico, Cal.	3/52	b	+	0	+	0	0	+	+	0
ULMACEAE													
2624	Trema	orientalis	C. G. F.	5/52	l, fl	-		0	0	0	0	+	+
2488	Ulmus	pumila	Chico, Cal.	3/52	b	-		+	0	0	++	+	+
UMBELLIFERAE													
2576	Solandra	guttata	C. G. F.	4/52	l	-		0	0	0	0	+	+
URTICACEAE													
2139	Boermeria	nivea	" "	1/52	l, r	-		0	0	0	0	++	++
VELLOZIACEAE													
2450	Vellozia	phantasmagoria	G. D. M.	3/52	l, r	-		++	0	0	0	0	0
VERBENACEAE													
2988	Citharexylum	fruticosum	C. G. F.	8/52	l	-		0	0	0	0	++	++
2985	"	tristachyum	" "	8/52	l	-		0	0	0	0	+	+
2054	Clerodendron	fallax	" "	12/51	l, fr	-		0	0	0	0	0	0
2868	"	minahassae	" "	7/52	l	-		0	0	0	0	+	+
2194	Congea	tomentosa	" "	1/52	l, fl	+	0	0	0	0	0	+	+
2705	Gmelina	asiatica	" "	5/52	l, fl	-		+	0	0	0	0	0
2704	"	hystrix	" "	5/52	l, fl, fr	-		0	0	0	0	+	+
2344	Helmskioldia	sanguinea	" "	2/52	l, fl	+	0	++	0	0	0	++	++
2729	Lantana	selowiana	" "	5/52	l, fl	-		0	0	0	0	0	0
2626	Petrea	volubilis	" "	4/52	l, fl	-		+	0	0	0	+	+

TABLE 1. CONT. - PAGE 30

Z I N G I B E R A C E A E

C. G. F.

2744 Amomum cardamomum

6/52 10 11

0 0 0 0

Z Y G O P H Y L L A C E A E

8 10 12

2958 Guaiacum sanctum

8/52 1

0 0 0 0 +

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